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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,586	01/16/2001	Hideyuki Motoyama	FUJH 18.241	4300

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EXAMINER

BATES, KEVIN T

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 05/14/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/760,586

Applicant(s)

MOTOYAMA, HIDEYUKI

Examiner

Kevin Bates

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to a communication made on January 16, 2001.

The Priority Documents were received on January 16, 2001.

The Power of Attorney was received on January 16, 2001.

The Change of Address was received on November 27, 2002.

The Information Disclosure Statement was received on June 17, 2003.

Claims 1-17 are pending in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 8-11, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Picazo (5841990).

Regarding claim 1, Picazo discloses an inter-LAN communication device for controlling inter-communication between a plurality of LAN segments (Column 4, lines 50 – 55) connected in a ring configuration (Column 10, line 17), comprising: LAN interface accommodation means for accommodating a communication interface of said LAN segments (Column 4, lines 52 – 55); traffic monitoring means for monitoring the traffic of LAN data (Column 16, lines 57 – 60); communication control means for controlling the communication for inter-connecting a LAN segment of a local node and a LAN segment of another node (Column 10, lines 48 – 52; Column 11, line 51 – Column

12, line 16; Column 14, lines 42 – 48); path selection means for switching a communication path according to the instruction from the traffic monitoring (Column 12, lines 1 – 7; Column 17, lines 43 – 57) means; and packet switch control means for switching the packeted LAN data (Column 11, line 51 – Column 12, line 16).

Regarding claim 2, Picazo discloses that said communication control means further includes a buffer which stores data transmitted from the LAN segment, and said traffic monitoring means monitors traffic by monitoring the capacity of said buffer which stores data transmitted from the LAN segment (Column 4, lines 60 – 64).

Regarding claim 3, Picazo discloses that said traffic monitoring means monitors traffic by monitoring the transmission intervals of data, which are transmitted from the LAN segment (Column 16, lines 57 – 53; Column 22, lines 10 – 14).

Regarding claim 4, Picazo discloses that said communication control means packets the LAN data by adding overhead which indicates the node numbers of a transmission source and a transmission destination (Column 2, lines 1 – 5).

Regarding claim 8, Picazo discloses that said packet switch control means further includes an address learning part, which learns information where the transmission source and transmission destination node number information which is added to a packet sent from another LAN segment, the transmission source and transmission destination address information which the LAN data has, and the communication port information which the packet switch control means has, are associated and stores said association information (Column 16, lines 15 – 53; Column 13, line 56 – Column 14, line 2).

Regarding claim 9, Picazo discloses node numbers of the overhead to indicate the transmission source and the transmission destination in said communication control means, a local node number which is preset, is added as the transmission source node number and the node number which is derived by searching and referring to said learned and stored association information on the node numbers, communication ports and addresses based on the transmission destination addresses which the LAN data bus has, is added as the transmission destination node number (Column 14, line 65 – Column 15, line 6).

Regarding claim 10, Picazo discloses that said packet switch control means compares the local number, which is preset, and the transmission destination node number of a packet sent from another node, which is another LAN segment, based on said learned and stored association information of the node numbers, ports and addresses, and the transmission destination packet is received by the local node if the transmission destination node number is the same as the local node number, and a communication port is selected and the packet is transferred if the transmission destination node number is another node number (Column 14, line 65 – Column 15, line 6).

Regarding claim 11, Picazo discloses an inter-LAN communication system where communication is performed connecting a plurality of LAN segments (Column 4, lines 50 – 55), comprising: a network, an inter-LAN communication device which is installed at each one of a plurality of nodes of said network (Figure 1, elements 12, 30, 34, 38, 50, 66, and 72), and a LAN segment connected -to said inter-LAN communication

device (Column 4, lines 50 – 55), wherein said inter-LAN communication device further comprises: an interface which is common with the LAN segment to be connected (Column 4, lines 52 – 55), means of monitoring traffic status of LAN data from said LAN segment (Column 16, lines 57 – 60), an address learning part which learns and stores data generated in one LAN segment based on said traffic status and routing information added to the LAN data from another LAN segment when the data is transferred to the other LAN segment (Column 16, lines 15 – 53; Column 13, line 56 – Column 14, line 2), and packet switch control means for inter-connecting one LAN segment and the other LAN segment based on said learned and stored information (Column 11, line 51 – Column 12, line 16).

Regarding claim 17, Pizaco discloses an inter-LAN communication system, which performs inter-communication between a plurality of LAN segments (Column 4, lines 50 – 55) connected in a ring configuration (Column 10, line 17), comprising: a network, an inter-LAN communication device which is installed in each one of the plurality of nodes of said network (Figure 1, elements 12, 30, 34, 38, 50, 66, and 72), and a LAN segment which is connected to said inter-LAN communication device (Column 4, lines 50 – 55), wherein said inter-LAN communication device further comprises: LAN interface accommodating means for accommodating a communication interface of said LAN segment (Column 4, lines 52 – 55), traffic monitoring means for monitoring traffic of LAN data (Column 16, lines 57 – 60), communication control means for controlling communication to inter-connect: the LAN segment of the local node and the LAN segment of another node (Column 10, lines 48 – 52; Column 11, line 51 –

Column 12, line 16; Column 14, lines 42 – 48), path selection means for switching a communication path according to instructions from the traffic monitoring means (Column 12, lines 1 – 7; Column 17, lines 43 – 57), and packet switch control means for switching said packeted LAN data (Column 11, line 51 – Column 12, line 16).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Picazo in view of Buchholz (5337313).

Regarding claim 5, Picazo does not explicitly indicate that said communication control means adds a sequence number for each packet at the transmission side so as to prevent a mismatch of the arrival sequence when the communication path is different for each packet due to path switching. Buchholz teaches a method of identifying a series of packets, which are being transmitted as a data stream and in order to keep that data stream in the correct order, generates packet sequence information in order to allow the destination device to know the correct order of the packets in a data stream (Column 3, lines 36 – 53). It would have been obvious to one of ordinary skill at the time the invention was made to use Buchholz's teaching of adding sequence information to a series of packets in Picazo's Inter-Lan segment device in order to

ensure that the packets sequence can be determined even if path switching alters their order in reception (Column 2, lines 10 – 21; Column 3, lines 48 – 53).

Regarding claim 6, the combination of Picazo and Buchholz teaches said path control means adds a sequence number for each packet after said added node number at the transmission side so as to prevent a mismatch of the arrival sequence when the communication path is different for each packet due to path switching (Buchholz, Column 3, lines 36 – 53).

Regarding claim 7, the combination of Picazo and Buchholz teaches said path control means matches the phases of packets by referring to said sequence numbers and deleting said sequence numbers of the added information at the receiving side (Picazo, Column 17, lines 14 – 15; because at the reception terminal the outer envelope is opened thus all the overhead added is ignored when the actual message is being read).

Claims 12-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Picazo in view of Beshai (6404735).

Regarding claim 12, Picazo discloses said packet switch control means in the inter-LAN communication device installed in each one of the plurality of nodes of said network further comprises two communication ports (Column 4, lines 50 – 64), and that the network can be in a ring format (Column 10, line 17), but does not explicitly indicate band sharing type inter communication between the plurality of LAN segments is implemented by the cascade connection of the band (path). Beshai discloses a plurality of nodes with inter node network segments that uses band sharing connections

(Column 5, lines 1 – 6; lines 36 – 42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Beshai's teachings of band sharing in Picazo's network in order to allow an the network to implement multiple classes of packets including voice communication (Column 5, lines 17 – 35).

Regarding claim 13, the combination of Picazo and Beshai discloses that said packet switch control means sets a fixed band path of a Point-to-Point connection between specified nodes, so as to guarantee a minimum access band between said nodes (Beshai, Column 8, lines 3 – 26), and the band sharing path is used as a bypass route when traffic exceeds the band of said fixed band (Beshai, Column 5, lines 39 – 42).

Regarding claim 14, the combination of Picazo and Beshai discloses that said packet switch control means always transmits the packeted LAN data for transmission to the band sharing path when only the band sharing type path is used (Beshai, Column 3, lines 52 – 67).

Regarding claim 16, the combination of Picazo and Beshai discloses that said path control means normally sends the packeted LAN data for transmission to said fixed band path when the minimum access band guarantee type is used, and dynamically switches traffic to the band sharing path when said means of monitoring traffic notifies a band overflow of said fixed band path (Beshai, Column 3, lines 52 – 67; Column 5, lines 39 – 42).

Claim 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Picazo and Beshai as applied to claims 12-14 and 16 above, and further in view of Zadikian (6724757).

Regarding claim 15, the combination of Beshai and Picazo does not explicitly indicate that said network is a SONET/SDH system used for each band (path), and has a plurality of ring configurations. Zadikian teaches the use of a SONET/SDH network in a router/node network (Column 1, lines 32 – 61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Zadikian's teaching of the SONET/SDH network because it provides a network that with the ability to quickly recover from failures (Column 1, line 62 – Column 2, line 9).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No. 4630261 issued to Irvin because it contains an inter LAN node with interfaces and a ring setup.

U. S. Patent No. 6419061 issued to Lewis, because it shows Band Sharing in a SONET/SDH network.

U. S. Patent No. 5477547 issued to Sugiyama, because it shows a inter-LAN node device in a ring setup.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Bates whose telephone number is (703) 605-0633. The examiner can normally be reached on 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (703) 308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KB

KB
May 12, 2004


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER